ABSTRACT

The present invention is directed to novel replication-deficient adenoviral vectors characterized in that they harbor at least two lethal early region gene deletions (E1 and E4) that normally transcribe adenoviral early proteins. These novel recombinant vectors find particular use in human gene therapy treatment whereby the vectors additionally carry a transgene or therapeutic gene that replaces the E1 or E4 regions. The present invention is further directed to novel packaging cell lines that are transformed at a minimum with the adenoviral E1 and E4 gene regions and function to propagate the above novel replication-deficient adenoviral vectors.